

informal drawing

049 U. S. PTO
09/903685
07/13/01

Treatment Chamber
Preparation

The treatment chamber temperature, pressure, and relative humidity are stabilized to the ideal treatment parameters for the product to be treated.

Load Treatment Chamber

The product to be treated is placed into the treatment chamber. The door with an airtight seal is closed and the seal is engaged. The product is allowed to equilibrate before processing.

Pressure reduction phase is
initiated in treatment
chamber

An initial pressure reduction is initiated within the treatment chamber to remove competing gases.

Initiate O₂ generation cell(s)

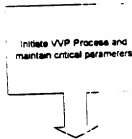
A properly dried and mixed gas mixture is prepared to feed through the O₂ generation cell(s) to generate the O₂ gas flow.

Gas Flow Back Phase is
initiated

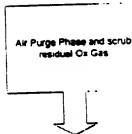
The ancillary control valve is adjusted to allow a controlled flow of the O₂ gas into the treatment chamber. The pressure, temperature, O₂ concentration, and water vapor concentration are controlled.

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The continuous flow VVP phase is allowed to continue for a predetermined amount of time to assure permeation into the product being treated. The pressure, temperature, Ox concentration, and water vapor are carefully monitored and controlled.



The Ox flow is terminated and the treatment chamber pressure is cycled to flush the treatment chamber of residual Ox gas.



The treated product is removed from the treatment chamber ready for further processing or shipment.



FIGURE 1

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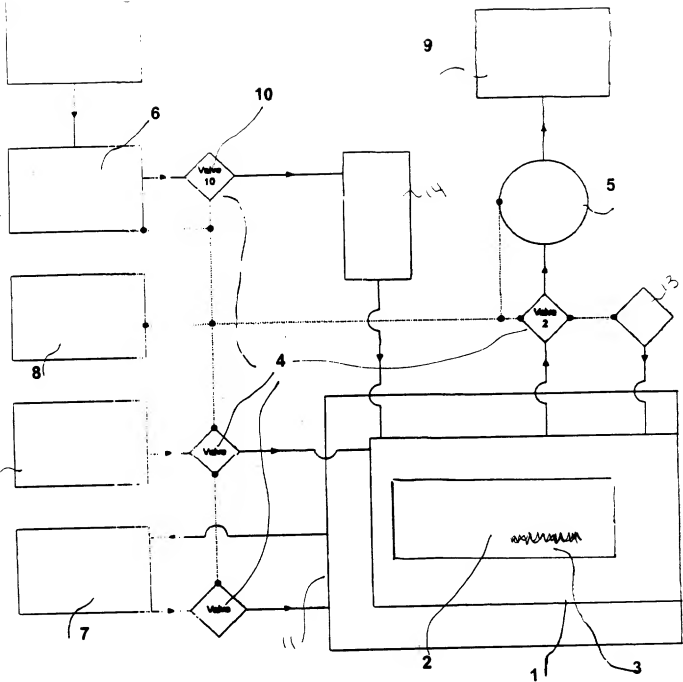


FIGURE 2

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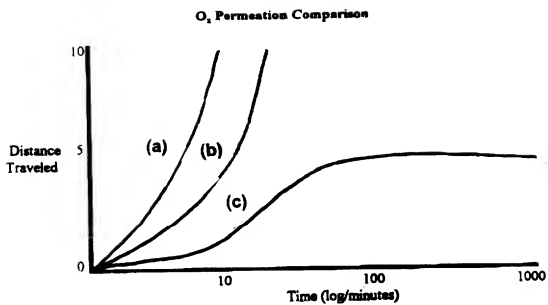


FIGURE 3